



SEQUENCE LISTING

<110> Yanofsky, Martin F.

The Regents of the University of California

<120> Methods of Suppressing Flowering in Transgenic Plants

<130> 19452A-002210US

<140> US 09/869,582

<141> 2002-02-28

<150> US 60/104,604

<151> 1998-10-16

<150> WO PCT/US99/24407

<151> 1999-10-15

<160> 18

<170> PatentIn Ver. 2.1

<210> 1

<211> 4512

<212> DNA

<213> Arabidopsis thaliana

<220>

<223> AGL2 promoter

<220>

<221> modified_base

<222> (254)..(260)

<223> n = g, a, c or t

<400> 1

```
agatctctat gaaaaatggc aaaatcaaca ataatccctt ggctatatgg tggattttct 60
gttaaaagtg acttatgggt agatttttta gttcataga ttctttgtcg aaaaaaatt 120
actttgtaca ttttagtgga gttatttaaa tttcccaatt gaacaaaacc atatattgat 180
gaaattcgca aatgcaatcc aaaaataaat atgttccact cttttgggta gcttttaact 240
aaacatgcgt tttnnnnnnn ttccagctag tacgagtctc tatatataaa ctttcttaat 300
atcgctaaca atttacttca agtttgtaat gtgataagtg aaagaccgta tatacataca 360
catgttaatc aactgataac ctttgtgect cgtgtgtcta gttactagtc aaccatcaaa 420
cgtgcatgat gctgtttttt ttagagtact attgttgtgt tatatataac taaacataaa 480
caatttgcta ttatgatata aacatagaat tttcaagcaa tgatatgttt agatgttttg 540
tataaatatt ccataaatag tagacacca tatatacaca aacatgaatt ctacctgagg 600
agaaacacat agatgttcaa attaaataat aacctataa tgaaaactct aaagtaagta 660
atacgaaata aaaatttatc ctttaataaa catataacat atatatcaac ttttaattggt 720
aattgtatca caagagccaa ttatttggtg actgtatcac acgtgcttaa agagagcgtg 780
ggaatgaaag taaagaagaa taaagaagca gagagatggg ctagaaatga gaaaacacac 840
caaacacctaa cctcaccctc acacatttct tatcttttgc tctcaataga ttccattgat 900
tcaaaacaaa attttcatta agatttcaca acctccacac acttccaaac acaattaaag 960
agaggaaaaa gaatcaataa ccctataaat aaaaaatcag acaaacagaa gtttctctct 1020
cttcttctct aagctagtac cttttgttct tgaaattagg gttaatttct tttttccaaa 1080
taccatcaat tctccagacc ataaaaactc aaaaagatca gatctttcct ctgaaaaaga 1140
gatacccaac ttatgttttt gtgtgtctgt atatagataa acattacata cccatatttg 1200
tgtatagaca taaaaagtgg aaattaaggt aacaaaaaga aatgggaaga ggaagagtag 1260
agctgaagag gatagagaac aaaatcaaca gacaagtaac gtttgcaaag cgtaggaacg 1320
gtttgttgaa gaaagcttat gaattgtctg ttctctgtga tgctgaagtt gctctcatca 1380
tcttctocaa ccgtggaaag ctctatgagt ttgagctc ctcaaagtaa acaactctct 1440
cactctttat cagtttcttg attgagtttt tgctagatct gagcttagat ctttgtctca 1500
```

```

aggacttggtt atatatagat cacacgatct tgatttctac gaagttgagt taattagatt 1560
tcttgatttc attttctagg gtttttttcc aattcttgaa atttaagatc tgggtttttt 1620
gttggtcaatg atttagaact gtgaattttg taatcgaata gattccaaat cctgatatgc 1680
aatctgaaaa gttttatata attaatatat gtctgtgtga ttggaaaactt aaaagttgga 1740
atcacagatt tctatgaaaa ttacaagtat ccaacgtaga attgataata tatggttaca 1800
tgcattaacc atttgttagt tcatcatact ttatggtggt taaaacttca aacgcgtgta 1860
tatctatgaa ggcaaagatt gtttgttttt tcttaaaaaac aatgtttaat agatttttaa 1920
ttatatgtta aaatagtttt gcttacatgc attcaagaaa atatagcgat taattccttt 1980
tttcaaataca caatttgatg atcaaacgaa aacgtaagat attgcttgca aatgatagga 2040
ttgaactatt gatatttgta aatataaata cgaacttta cgtttgaaag ttgaaacaat 2100
caaatccaaa tcaactcgtat tataatcaga taaataatgg aaacaatctt caattttgat 2160
ggaagaatac tttaaaaactt gaagagcttt ttttttttat ggtgatttat aggttttagat 2220
ctccaaagtc aagtatgatc tttttaataa actcttattc tctctttttg agttattttc 2280
agcatgctca agacacttga tcggtaccag aaatgcagct atggatccat tgaagtcaac 2340
aacaacacctg ccaaagaact tgaggtgttc ttaattcaaa tactattttg agttcctatc 2400
atatcatttc aagaaagatc ttttttttta aaagtttgtt ttcgtgaaat atttcagaac 2460
agctacagag aatatctgaa gcttaagggg agatatgaga accttcaacg tcaacagagg 2520
tacatatcta tctatacctc catatattta ctcaattctg tatccatgta gattcatatt 2580
tgtaggtgtg tgtggctttt gttggtgcag aaatcttctt ggggaggatt taggaccttt 2640
gaattcaaag gagttagagc agcttgagcg tcaactggac ggctctctca agcaagttcg 2700
gtccatcaag gtatctttat gcatggaatc aatgattcaa atgagattaa tttgtgttgt 2760
ttaattatac tactatggtg gtatgatgat tgtttgcaga cacagtacat gcttgaccag 2820
ctctcggatc ttcaaaaataa agagcaaagtg ttgcttgaaa ccaatagagc tttggcaatg 2880
aaggtataat tacagaataa atgcatttgg tgactgcga tcaatctctt tcacagagtt 2940
taagtttcta aatatgtttt gaaacatctc tagttttctt gtttctgatt atagtctttt 3000
ggtgaaatgt aaatgtttag ctggatgata tgattggtgt gagaagtcac catatgggag 3060
gatgggaagg cgggtgaacag aatgtttacc acgcgcacat tcaagctcag tctcagggac 3120
tataccagcc tcttgaatgc aatccaactc tgcaaattgg gtaaatctgc cttgaaaaat 3180
catctgcaaa tcagtttggt tacttaacta ctaagattgt ccttatttaa ggttctttag 3240
ttgcttggtg taaagaggat catcaatgtg tgtgaacctt ctaagttgat gttttggcga 3300
tgatgatgat gatgcaggta tgataatcca gtatgctctg agcaaatacac tgcgacaaca 3360
caagctcagg cgcagccggg aaacggttac attocaggat ggatgctctg agaatacatg 3420
actgtgatga agctcaccca caaaagacct tatatatata taaagtatag atacaagact 3480
tggatttgta gacataagtg gctaataataa tggtoctgag gatcttctag acatttgtat 3540
cttttgggaa tccttgctta tattaagaat tcaaattgtg ggaacttggt ttaacactga 3600
accatgacac tggtttatta tcatgtaatg agagaaacat ttgggttaca atgtgatctc 3660
tccttgaccc aaatacacaa tataaacctt atgccaaaat acaagcatca catatatata 3720
ttcataaaag gtttaagtaa tcatacaaat gatgtaaaaa gtttcatgcc ttgaacaaaa 3780
cactgcgcca aaggcaaagtg gtaagaaaca tgtcagattc ctgtgtgcat ctgttttgc 3840
gctgctgctg ttgttatctc tcaagagggt ttctcagaa ctccataagc caaacgtgca 3900
gagagacggt tcctcattcc cccatcgtat acaataccat atattgttaa aaaaaagata 3960
tcacagatca aatcaatttg cacatctctc tgctgccttg tcaatctcct caggtccggg 4020
caaggcagat caagacagga tcaatggcaa caagttacgg tgtttcgttg aactccatca 4080
cctgcaaatg agacgaattc acagcagaga aaaaaatatt ctttagtcaa catgaatgag 4140
aaataattca aatgttctga gtttcaggaa gaatgattag ccatatttgt actagacaag 4200
acaagtaaag attttacgca tgtgcttcta ggggtgttgt acatctttca ttctattgat 4260
ctctggatca ctctctatt tatgcgtgat ggtgtctgag tctgactctg aaacactagt 4320
aaatgagaag ccgaaaactg gcttggaaga acatgaaaag tgtttacctt tccacaaaca 4380
gggcagtttt cacttctctc catccattca taaatgcaac taaggtggaa atggtgagaa 4440
cactttgtaa caatcttcgg gttctctgat atgtattcta caaaacacac gaaataatct 4500
gatactaagc tt 4512

```

<210> 2

<211> 3589

<212> DNA

<213> Arabidopsis thaliana

<220>

<223> AGL4 promoter

<220>
 <221> modified_base
 <222> (1532)..(1537)
 <223> n = a, g, c or t

<400> 2
 tgatagcgct tcgttcatca tgcagaagaa accaatgttt ccccaatctc acgcgcctcc 60
 tcctatctac caccacttgg acaaatcccc tttgcagtat tcgttttttt ttccggacat 120
 tgtacattca aaagcattcc aagtgtctaa taaacataac taaccactcc aagatgcaaa 180
 atctagctac gacgaacaaa ttttaacta tagagatgaa ctttaaattc gggcattaat 240
 tagtggaact tgagctattg atgatcgagt tttctgactt tttgaagctt aagcttaatt 300
 gagttttata tacactatat aggccttgtaa taatatggat caaacaagaa aaatacaaac 360
 tacaaattgg gaattgggtt ttaaaacgtt atcgttctat tttaattcag gcacgtacct 420
 ttagaataatc aagatccatg tttcaatatt tctgttgaca aataaataaa gatgtctcaa 480
 atataagttg ggcaacgtac gtgtagacct aaaagagtcg aaacattggg atctaagtta 540
 tatatctaca tggattatat aacaagacaa cgtttgtttt aaaaacttca ttgatttttc 600
 ttaattagta gcaactagca actaactact catggcaaat aatggcgtct gcgtggcacg 660
 cgacttggga gagaagggtg gagaatgttt ttactttctg tgtaaaagat ggaagagaga 720
 gaaagagtaa agaagtagag agagagatat tgtatcacca aaccctaag atctctcacc 780
 ctccaaaatt ttcttatctt tatagctttt atagattcac aaaaactttt cttcagattc 840
 acaatctcat cacaaccctt caaaaagaga aaagatctaa agaataaaca agagccctaa 900
 tatcaaatca caaccaaaaa aaccaagaa agctaattaa agttttctct ctagctattc 960
 ctcttctttt cttgttcttg aaaactaggg tttacttcac caaaaagata agatctttcc 1020
 ccagaaaaag caatacccaa gtcagtgttc tgtgtgtctg tatatagata aaacattaca 1080
 taccctaata aggttacaca aatagctata aaagagggaa aataagatag ggattttttg 1140
 ggggtgaggaa agatgggaag aggaagagta gagctcaaga ggatagagaa caaatcaac 1200
 agacaagtga cgtttgctaa acgtagaaat ggtttcgtga aaaaagctta tgagctttct 1260
 gttctctgag atgctgaagt ctctctcatc gtcttctcca accgtggcaa gctctacgag 1320
 ttctgcagca cctccaagta cttctctttc tttatacact tattagatct gtgtgtagat 1380
 ctttcatttt ttctagtctt gtgatgagtt ttatctttct tgattgcttt ttaacaaaat 1440
 acttgatata ttttcagttt cttaatctga ctctaattag gttttgatta ataggaagga 1500
 aataaatcca ggtacctttc aaggtgaatt gnnnnnnngag atctgatctt aatttaatca 1560
 tcatgtcaaa ttcttaggga ttaatttgca atctattttt agatttatcg gagctaggaa 1620
 agtataataa tgataacta ttattatcat gtaatttcat tgtctctaca cggatatata 1680
 tgtgattaga acttggtaaa gtaactaaa gattcacagt cttcaatgaa attgaaaaga 1740
 tccaacgtag aataattagt ggttccatgc attaaccagt ctaattaaag ctcatgcaga 1800
 catttaagca ccacatgaat ttaatatctt ttaattaaag ggatcttctt tttataaatt 1860
 ttcttttggt agcttttaaa attttagttt gttcattaaa atttatagat cctcctctcc 1920
 tgatttgtgt tttccgatcc tttccagcat gctcaagaca ctggaaaagg atcagaagtg 1980
 tagctatggc tccattgaag tcaacaacaa acctgctaaa cagcttgagg tttaatctcc 2040
 aacatctctt cgatcttaat tatttatctt tttttaattt tatctaaaga aaatgtttga 2100
 ttttgagaca aaagcccttc aaagtttctt acatagatat tcaattgtct attatcttcg 2160
 caattttcag aacagctaca gagagtactt gaagctgaaa ggtagatatg aaaaactgca 2220
 acgtcagcag aggtatatac attaatgtgg atgatgatca tttataaaca gcatatata 2280
 atatatatat atatatatat atatagaaag tattgatcat gaaagtgtgt tgcagcagaa 2340
 atcttcttgg agaggatctt ggacctctga attcaaagga gctagagcag cttgagcgct 2400
 aactagacgg ctctctgaag caagttcgct gcatcaagggt gatttacttc tgtacatata 2460
 ctgaaagatt cacacaaatc tttctctata tatagactga gacacatgca tgaaatgttt 2520
 ttgatgcgtg aggttatctg aaaatgcctc ttcttttttg cagacacagt atatgcttga 2580
 ccagctctct gatcttcaag gtaaggagca tatcttgcct gatgccaaca gagctttgtc 2640
 aatgaaggta tatgatgatg tttctctctc tctcctccag tttctattta tagatggaaa 2700
 ctttaaatag tccaatttat atatatgagt cttaaattca cattcttcaa ctgctatagt 2760
 tttcttttgt attatttcta tgatatcttc aggaaagttt gaaaaatatt gtgttttgtt 2820
 tagctggaag atatgatcgg cgtgagacat caccatatag gaggaggatg ggaagggtgg 2880
 gatcaacaga atattgccta tggacatcct caggctcatt ctcagggact ataccaatct 2940
 cttgaatgtg atcccacttt gcaaattggg taaatcaaac aacttttctt gctttaagac 3000
 atcaacttag gttataaaca gttagcagtt tgctttaagc ccaacattgt ctttgtttca 3060
 tagaggcttt gggttaaaact cgtgttgttt agtctaagga ttcagcactt tgatgtctga 3120
 agtatggaaa atcaatctct cagacttgaa aatgtgggtt tctattgttg acttcgaaac 3180
 tatgttgttg tgggtgttga aacagatata gccatccagt gtgctcagag caaatggctg 3240
 tgacggtgca aggtcagtc ccaacaggaa acggctacat ccctggctgg atgctgtgag 3300

```

cgatacttct tcccccaata aagatcttaa gcaagtactg gtggggtctt cgtgggtgtga 3360
tcttagatct tatgcatatg aataataatg ttattgcaca agacttttgc ttttgtagac 3420
acaagtggct atagctgtaa tagccttcaa catctctctt ctgtttcagg atttgtttgt 3480
gcctattgta attgcttata tatgtatggg ttgtataatg tgtgaaatgt taacatcgac 3540
catgtctcat ctggtgaaga tcttatctcg tctatgcatg ataccaaaa 3589

```

<210> 3

<211> 14940

<212> DNA

<213> Arabidopsis thaliana

<220>

<223> AGL9 promoter

<400> 3

```

taaaatctgg aagtttccag ccctgataat gttgcagaat aaattagtgc gcagtaagtc 60
tccaaaaaga gagaaactac aaataaataa accaagtcaa attcattaac aaggagaaca 120
gcatgaaatg tttcccaaac acacaaaatc ttgactagcc aacagcgctt caaatgagga 180
agtaactaat ttcagtagct tgggtatggg gaagtataat taccttccac cacacatata 240
cgtagcctat caccccaacg ataatgatca aaccatagtt tctaccacct gtacattgaa 300
ggaaagtgtt aactgttttc ttccgaattt agatcaacag taaacaaaga atgggtgttac 360
tctaagtctc taatgtaatg ctttcctaaa tgctacaaag aaaagccact tatcagaaca 420
aagtatgtct tgtttgatgc gagaaaagta gcaaaagaga ataaaacctg aaatataatt 480
tcaaaataca atgtctagaa atctaagtggt gcaaatcctt tattcaagtt tcatatcaaa 540
ccaattttga catttctagt gcagaacaga aaacaaaact tcaatataaa aaaatataaa 600
aactccagag gacctgatcc tgaagggtgaa acaatgggtga taggtctgtt tgaccccagc 660
aactgtatct catgcctaag actgttaacc tacaaaaata aatagagctc aggcaagaaa 720
ctattgattc acgataaatc tatgtcctca gcaagtctat attatccagc tccatccgat 780
agcttatcat cgccaataga ttaatgtgaa acttacctgg gccacaagta catcatcggtg 840
ggggtttgcta gctgatttgc taggttcgtc ttgtttcagt tgctgaata ccactctgtcc 900
acataaaca aacccattgc ctcattttgc caaacgcgat catacacatg tgaagtcgcc 960
aaagcttttg cacaatatag aaatttagaat accttaaaag caccagaaac caaattggag 1020
acatgtggta agcccccttc tttagaaaat gctgatccaa taagacctta aagtaaccatt 1080
tgcaaaaatc acagtatagt tagtaattgc agtaacttgg acgaacatta agcatgtaca 1140
cgaaatcaat cgactcagca agttcacaat aattgtacta gtaggtgcat tcacagagaa 1200
actaaacata aacttctcct cagatgtatt cagagaatag ctatactcca ataaagtctt 1260
aaactttgag ccagtcaagt acactgatca aagggtttat gaaaaacact aacttcttat 1320
cctctaattg cgattaccca tagacgaaac caataaaaaa gcaatggaga actagagcac 1380
agtcactaca agaaataccc tataaaagta ccgacctgca ccgatgagga tggtagactt 1440
cccagacgga agagccatgg ctagagacga gcttatacgg cgaagaacta agatggcaaa 1500
cgaatccgcy tgagatatc taagagagta ttggaagag agagctgcag gaacgtaccg 1560
gtgaaacaga ggcgtttttt gggacgatga agtgaggcag cgagagagat acgacgtgcg 1620
actatattgt tcgcttggtt aggcaacaaa acagagttgc ttctaaaacc cgaaccgaaa 1680
tgtccggtct gattcggtct aaatcacgat taggttcgtt ttaaaacctt ggaggcaata 1740
accggacgga tcataaatc ataatagaga cagacaaatt ggtccattat taaaatcact 1800
tgggcatattg gggatgattc aaatgcccaa gttttctcaa atttgagca ttcattcacc 1860
taagacatac ttgagcaaca acaaagtga gtccactgtc atatcttatg tctcaaaaag 1920
tattgaaatg tgtcaattga tattggagag gcacactagc taagggatta ttcaatcaat 1980
ttccagcaat ttaattaaac ttattttag tagaaagtgg aagataaaag atctcaccc 2040
cacatgttca aaaaaaaaag ttgaaaattg aagtaattca acatgtagca tagagcccaa 2100
atatgtctca tttttttaat ccatataatc tcaaatcctc ttacttactt ctaaacatat 2160
ggttcccata atcataacaa tgctatgtta acatggccgg ttctaaagga agccaagtgc 2220
agcaactgcc ttacgcctct acgtgttaaa atgaaaatga agaccactga ccacttctat 2280
taaagcttca ttcactagt tataattaca cattttttta aggatttatg agtagtgatt 2340
gaggcccata tgtttgatg tttgttttct ttactatatc attacttgac tataagagtt 2400
ggtttcctat tccattctct tttctaacag cctatatatg taaaaatcta agcaaaat 2460
cttgtaaga ggatgattgt acatttgtac ttggttatct cgccccggcc caaaacatac 2520
ctaaggccag gtgctatata ctcaacctgc tttggcatte atcaatctac gaactttggc 2580
gtgaaacggt gacaagatta acaagattca ctctcaacta cgatgttcta ctatctcaa 2640
tctttaaaaa agtgatcaa actgtcaaaa gtctagtctg atggactagc ttcaacactc 2700

```

ctccaaatct	agttcgatgg	actatatatt	ctcttctgat	gctatcotta	tcttggatta	2760
ggcatctaaa	ctatgggtttt	aatgggtgtca	tgagggtttta	caacttacaa	ggatgaaagt	2820
tatttactcc	cagtcactat	cttaatcaaa	tgacaaaatg	ttaactagtt	tgagtgtcta	2880
tatatagtt	atgaatctga	aatttattag	tgtgtacata	agtatacaa	cacttaaata	2940
acatctacat	gagtttttaa	ataacataat	aatccattat	agtagtttac	ggcataaggt	3000
atgaaccaaa	tttttcattg	cacgctgaaa	agtgaatacc	tttaaaatgc	ataatgacta	3060
agagtctatg	acaacagtaa	cttactatat	attagaggag	gggtgaaaaa	aaaagtagag	3120
agactgggtcc	aaaaacttaa	ccccactcaa	taaaccaga	cgtgacttgt	ttgacgataa	3180
ctccatcttt	ctatttttggg	taacgaggtc	cccttcccat	tacgtcttga	cgtggacct	3240
gtccgtctat	tttttagcaga	ttaatccaac	gggtcttatt	ctttcttcga	cccttcacga	3300
cattgcctca	aagccgtccg	attctcatct	cacgccaat	ggaccacata	tatcaccagt	3360
actccgcaac	ttagctgtcg	tgtaggattt	cacgtggcat	ttatttgttc	tagttttag	3420
tgcaaacatt	gcaagttgat	atgggtccct	atcgatcacc	gtcgtctctt	tagcttcaca	3480
tcgagattct	tctttctttc	ctacgtgtaa	tagcattttt	gattttgaga	atttcttag	3540
aaacgttggg	tctctcatcg	ttgggtgatc	catccatcca	aatgggacct	gtgtgtgctc	3600
catccagggc	atatgatccc	aaagccaaaa	gagtatttcc	aagtgtcttc	tttctttctt	3660
tctttctttc	ttactaacct	ttttttttct	tatgttttag	actaagaaat	ttattcggcc	3720
atatccactt	ttacgaatat	acttcttaca	agatctagat	ttttttgagt	taattcgggtg	3780
tatataacat	tgcatgggac	tgcaattaag	taatggtaat	gtgatcatga	tgcatgtgt	3840
cgttatcagt	agtataatat	tgatgggcta	ccctggaaaa	caaaattacg	tgttatatgt	3900
acacaatttg	gtagaaccgt	agaaattaaa	ctgaataaaa	ccttctataa	tgttcaaaat	3960
tatatgggtac	agattaatac	ggaaaaacat	tcacgtctta	cgtaacaatt	aagtggaaag	4020
taaaattatc	ccaaaaatat	ttatatcaca	tcattgttat	atttctaagt	ttttttatat	4080
ctctaattgg	atatgtttta	cagattgttt	tttgggaaaa	ttcttaaaaga	gacttgaaga	4140
atgttttttt	tttattttct	tgaaatgttt	gacacttgaa	accgttttaa	aactcaaata	4200
tagtatatat	cattgttggg	ctcatacctt	gtaattcacc	acatatatta	tcaatgggga	4260
agatttgaaa	atttttgggg	gatcacaaaa	cgaaggaaag	agtacaaaaa	gagaaggaaa	4320
agatagaaga	tatatgtttt	taacttcatt	ggtagacat	caataaataa	atagttgaat	4380
gtacttttag	ttctcttttg	gtttaatgca	catcatctcg	atcaattgtc	atcatcttac	4440
attgaattat	acgaccagat	ctgataacaa	gtgaattcgt	acttgccctt	ccctttcttc	4500
tcatacgtcc	ttctaactaa	ttttgattgt	aacttataat	tatataacca	tatttaattt	4560
tattttatct	aaaaccaatt	gaagcaaat	aaaatatcat	aaatcttgag	tcccacatga	4620
agacaatata	taaaactcgt	gcaaatttgc	ttaaaatgct	tctatgagac	catgaccaag	4680
tgagattaat	aagcgattca	atgtgcaaat	caaaagagaa	aagaagctaa	tgggtttaaa	4740
tataaccaa	cagaataata	atgctatgtt	tagtttttct	aattgaatca	tacctttgtg	4800
tccatcacct	acttaccggg	cagaataaag	caattacgtc	tgcaaccaa	aagcactaag	4860
actttcgggc	agacatgatc	tctaacatcg	gacgaaccct	aagataacca	aaataaacta	4920
tatcttatat	tcaaatctct	gtttatttta	tccatttatg	ttttctttct	ttcccataat	4980
tttttttggg	tctcatcaga	ctctcttacc	aaactgaatt	tatcaacatg	gttttttttt	5040
tgccacacat	aaaatgggtg	tttataaagt	agactaatac	aaaagacatt	tctgttaatt	5100
tcactaaca	aaataatctt	agcagtacta	tagattggaa	aaggaaaagc	aaatctagca	5160
gtaagattta	tcaaaactag	cagtaagagt	tttagatatc	atgaaaacat	cacaaacgag	5220
tagtgtttta	ctttacattt	ttaaaccaatc	acaagggtag	ttccgtaagt	tgggaaaatc	5280
gtacgaggct	tcacctagtt	aagggttaggt	cacatgattc	cctgaactcg	attttataag	5340
taaaaaagaa	aaatttataa	aatcaaaatt	ttttatataa	aaaaatcagg	tggatttatc	5400
agaccctacc	atcgagatgt	cgacacgtgt	ccaaactcat	tcattgacct	actattttct	5460
gttttaggggt	gcaatcactc	atcgcacacg	cgccatctcc	accttccatt	attaatctct	5520
cattttcaac	atcacactct	tacgaatcat	acgattttta	tatctctgtc	tctctcaacg	5580
tattaaataa	aaatgggttt	aaatgttagg	gttttttgta	ggattttcaa	ttattaatct	5640
ctataattcg	atgaactaag	taaaaagca	tcaaactttc	ttggcagaat	cacatttttc	5700
tctaaactaa	atatggactg	aaattgaaaa	attaaaccac	tagctagaat	aaagtgttgg	5760
tgagagtggg	actctaattt	ctctccttta	ctaattatgt	ataaacacaa	aaatgcacca	5820
aatttttagg	tttgaataa	tctaagcatg	gatagggtta	ttaacatttt	ttctttcaat	5880
tttgcaatat	ttgaataaat	cctatgaggg	tctttggtac	acaataattg	gagggtatat	5940
agttgagtct	gagagtatat	tagaaagaga	atatttcaag	taatgaagct	gacatgttta	6000
tatgtacttt	gagagaagtg	ttgtgagatt	tgtacaaatg	tatatgtaca	ctttaaaaag	6060
caatataaga	tagataaaaa	aaatataaag	aaaaaaagaa	agaaagaaag	aaagaaagag	6120
agaggctcat	atatatatag	aattgcttgc	aaggaaagag	agagagagag	attgagatat	6180
cttttggggg	aggagaaaga	aaaagaaaaa	gggaagaggg	agagtagaat	tgaagaggat	6240
agagaacaag	atcaataggc	aagtgacgtt	tgcaagagag	aggaatgggtc	ttttgaagaa	6300
agcatacgag	ctttcagttc	tatgtgatgc	agaagttgct	ctcatcatct	tctcaaatag	6360

aggaaagctg	tacgagtttt	gcagtagttc	gaggtatata	tctacttttg	tatatatatt	6420
acttataaca	taaacatttt	atatacatat	taagtaacac	aaaaatgtct	tgtatgtatg	6480
ggtctctctg	tgatgtgttg	ttgtgtcgtg	cgtacgtggt	ctatcatatc	cttttaaaag	6540
aagcaaagag	gaaaaaaaat	ttgggatacc	ccaaatctgt	atcattttat	aacaagtttg	6600
cttttttgat	gttcttttgt	gtttctcttt	gatttccatt	tttgtttttg	attttttttc	6660
tatttctctt	tacatctatc	aaagtttttt	ttcttatatt	ttattgctta	tttgtttgtc	6720
tacttaattc	acattatctg	agagaagaac	aatctatctg	atatgaaatt	aggggttaatt	6780
tctcttgtga	gtactcttta	attcacataa	gcttaaagtt	tccacctttt	gattctgggg	6840
gtcgtccaat	tcgatcaaat	cactcaattt	tggtgtcaga	ttgatataag	ttcatagggg	6900
gatattgttt	ccacgacaat	ccatttttagt	aacccttagg	ggtttccaat	tttgggtttt	6960
gaattgacgc	taatgtcaaa	ttcatctaaa	gtccgttgga	tatgtatact	tggggatggg	7020
attcatcctt	ttttctgggt	tcttttagatc	ttctcttaaa	agactaacag	attttgttgt	7080
aaaccctagg	aaacagttta	aaatcccatt	tttaaaaaca	tgttttgaac	ttgatgagta	7140
agattaatgg	aagaaatgat	gtttttgtgt	gggtgtgaagc	atgcttcgga	cactggagag	7200
gtaccaaaaag	tgtaactatg	gagcaccaga	acccaatgtg	ccttcaagag	aggccttagc	7260
agttgtaccc	aattctcttc	tctttcttct	aattacctta	attaattact	ctcaattttt	7320
actttgattt	ttagagtcaa	atgattaatg	ttataatttg	tcataactt	caggaactta	7380
gtagccagca	ggagtatctc	aagcttaagg	agcgttatga	cgccttacag	agaacccaaa	7440
ggtaaaactaa	ttagcttctt	cagctacctt	cagagagtgt	ttgttttttt	agtagatttt	7500
tttgatgggt	ttgatgttga	aataggaatc	tggtgggaga	agatcttgga	cctctaagta	7560
caaaggagct	tgagtcactt	gagagacagc	ttgattcttc	cttgaagcag	atcagagctc	7620
tcagggtact	actttgttca	tcaatatctt	tatacactga	tctattttcca	tagtaagatt	7680
aaatttggtg	tttaattctg	cagacacagt	ttatgcttga	ccagctcaac	gatcttcaga	7740
gtaaggtaaa	taaagaaaca	ctcattctcc	tctctaaatt	cctcatctaa	aagtaatgta	7800
accaagaaaa	cacaaatatt	tggagcagga	acgcagtctg	actgagacaa	ataaaaactct	7860
aagactaagg	gtaattaata	tacattctca	tatcaccaaa	ttaatgcatc	actaaatttg	7920
gttataatgt	gtgtgtgtat	atacatatgt	gacagttagc	tgatgggtat	cagatgccac	7980
tccagctgaa	ccctaaccaa	gaagaggttg	atcactacgg	tcgtcatcat	catcaacaac	8040
aacaacactc	ccaagctttc	ttccagcctt	tggaatgtga	acccattctt	cagatcgggt	8100
aacttttagac	tagtataacc	aatttgattt	gagttctatt	ataagctttt	cttaagaaag	8160
tatctcaaac	tactaaattt	tatggagcag	gtatcagggg	caacaagatg	gaatgggagc	8220
aggaccaagt	gtgaataatt	acatgttggg	ttggttacct	tatgacacca	actctatttg	8280
aatctttctc	acttaatcaa	tcctctctct	ttttttttga	cattttttaag	atgagtgttc	8340
tattttatta	cctctctcat	gttttctgtc	ttgtgtgcat	gtgtgtgtgt	aatgtttatg	8400
cccttctatt	attcaataat	tttttcgaca	attttgtctc	ctattttttac	ccattactcc	8460
taaacttcct	gatccagttt	cttttaaaat	aactcccat	ttatgcatgt	tatctaacca	8520
attctcttaa	ctatgattta	tggtacgata	taactcacag	tctcacacta	tctatttggt	8580
gtttttttgt	ttgagtcttg	agaagggacc	gcttgtttat	ctctcttggt	aaagagcaac	8640
tcactggcca	ctgcttatgt	atctgtaggc	cccacctata	tcattttggt	tatatctata	8700
cttttgtaga	gggagtatta	ctatagagaa	gaagataaat	ttggttctaa	tatatcttgc	8760
aggtagttga	tattctcaat	tatcatgaag	attttagatga	caagtttatc	agatacctta	8820
aacataggtt	taagatctca	attgaaatgt	gaattcaccc	gacgattaga	gttacgatct	8880
aaggaagcgt	ttcttgaatt	ttgagtttgt	ttgatcaaga	gtagaatgct	tttctattac	8940
taaggttggt	aatgcttata	ttccatgacc	aaggccaaga	gaacaaacaa	aaacatgggt	9000
cctcttgatg	tatagtaatg	gctcttaatg	gtcatataca	gagaaaaaaa	gattaatgtc	9060
gttgacacaag	cttgaagtta	cttactcttc	gtcttctctc	ttagtgtctt	cgtcttcttc	9120
atcctcatcg	ctcccaatat	agggttcat	ctacttgaaa	accaaatgct	catgcagtg	9180
aaaaagataa	cagaggttca	aattaaggca	aacaaaacta	caagtggaga	agggaaacta	9240
caagtggtaa	gatgtaatgt	tttgactcaa	aaccagatca	gacaatgaaa	aaaagtattg	9300
atacaaaaag	tccatccgga	agcataatta	ccgcttgcag	gatgtcatca	gagatgtctg	9360
ttagtccggc	aatggcatag	atggtgagcg	gaccagagta	gcgtaaatcc	tctaaatact	9420
gtctaaaagc	cggaccgacc	cgacaaggat	cacagtcaag	gggaatagga	cacctattga	9480
tatocaaaaa	gactgttggt	acagccacat	catccttgtc	caactgggta	gccccaaagg	9540
aaactagttg	tggttaagagc	ttgtttgact	caaaaaatgg	ctaactagga	tgatgctgaa	9600
ttaccatctg	ttcatgtttt	tgactagaga	gatgggtagt	gaaattttca	aagcctttgc	9660
aaaacgcctg	tgggacctgt	ttcagaaaaa	gacttaaaag	acttgagact	caaggaaaat	9720
aatatccatt	atataaagat	gacaacaaat	attaacggaa	gtaggagtga	ttgagaacga	9780
ttctagtaga	agagacggct	cgcaggacgt	cgtttataat	aggccaatgg	cagagatagt	9840
gagaggaccg	gagtagccta	aattctttta	atgtcgtttg	atacacggac	caactagacg	9900
agcatcatac	tcagagggaa	cgggacacgt	cttgatatcc	cagaagaccg	atgttacggc	9960
cttagcttgc	tgccgcgttg	ccttcatcat	catcttctcc	ttttaatcta	taacggaaat	10020

caaacatcag	ataaagcatt	cgaaaagata	gattgacaca	ggttaaatca	tccacttcag	10080
agaaaaagag	agggacatgg	ccgtaaacaa	tgagataagg	atcggcctaa	tgttttataat	10140
gggcttgcg	ttaatgggcc	tacagtttct	tgaatcagcc	ttatgcatga	gtccttagtat	10200
ttttcaact	ttttttttc	atctttcttt	agttacaata	gatttaaagt	gttttttggt	10260
aatgccattg	caaaatttgg	taactgttta	taacattggt	cctcacttca	aaattttaaag	10320
caccattaat	aaaagctata	catataatta	taacttgggt	tttgtgcaaa	aaaaacaaac	10380
aaattaacct	ttcattttta	ataaatgcaa	ttcaataccg	caatatcaaa	agtaaccctg	10440
ataaccttta	ttcgtgtata	gatttttagaa	acagtataag	tcaaattatc	aaaactatgt	10500
tgttttaagc	attttaaaaa	taagaataat	aataatgttg	aagggtggat	ttgaaccctat	10560
gaactataga	acaaacccaa	gcatgcataa	ccacatgcgc	cgaacaaacc	aaaaactcat	10620
ggctttgtta	aacatataaa	aatattcgaa	taaaaaatgt	ggggaacttg	ttaccagttt	10680
tggttctttt	tggagccatt	tttttcaaca	cagatattgt	taaggagttt	caggtaaaac	10740
tgtatattat	gcagggaacc	acagtaggct	ataatgaaag	tcacactgtg	aagtttagcag	10800
acaagttttt	acttaaagat	gtgagttgtg	atctttttga	tgtaagtctt	gatgtatatg	10860
ttgacaaaatt	atataagttt	gtattgcata	ttctatgact	tacgaagttt	ctatgcaaga	10920
aaagccggga	gaaaatttcc	gtcaagtaac	taagagatcg	taattcttgt	ctgaagaaca	10980
accttttttt	attattttgag	tttaggttgc	caacagtga	caaagggacg	agataccata	11040
tgacaaatat	cctctaacgc	catttcaaca	gttaatcaac	agtgtcggct	atatgcatgt	11100
gctaacaatg	cacaagaaca	ttgtcaccat	cccgtgaata	tgaatattaa	tgattatgaa	11160
cgagtttgta	gagttccaag	aggaaggtag	taccttctca	tactcattga	tcatatattt	11220
tgtttcttgt	ttgttttagt	aactaggggt	attcggattg	tttttcaaaa	taatagtaat	11280
atgtcaacta	tattttataaa	aaaaaaaaact	aaataacttt	tgtacaattg	atcatttttt	11340
aaatatatca	taaagattca	tcaatatatg	aacatatatt	tttaacaatt	acactaattg	11400
gctatatagt	gtatagttcc	ttttgtggag	aggttttaagt	tcagttcaga	gattattgta	11460
cttggtaaaa	tatttgcctt	tgtaatttag	ttcatcttct	agaatacaga	tttgggccat	11520
gtagttttcc	agaaaacacc	ggaaaaaaaa	ttcacacttc	acaccagaaa	caataaacga	11580
ggaacagagc	ccaaactcat	ccctataatt	gggcccaaaa	aaagcagagc	aaaccaaac	11640
aaaatcaagt	aaatccattt	acaaatatgc	tttataatta	ttatttttct	caaccacaaa	11700
tatgctttat	aatttatgta	aatgttatat	gaattattta	cgatttattt	taattacttt	11760
atcttgggaat	tatcttacga	agttaatgaa	aatattttta	atatctaatt	tatatatgtc	11820
tggactaaaa	taaatagaaa	tatctgtatt	ccaatcatca	caaaaaaaaa	attctcatca	11880
tctttgatat	atagaagttt	tttaaaattt	cagttttaca	gattttacca	attatagttt	11940
tataagctta	tgctaattat	gtgatcaatg	caaacaaaag	ttgacaataa	taaaatgaag	12000
tcaaatatga	tagattccta	ctataaatat	agactcgtga	ataatactcg	aatcagttct	12060
tgaggttttg	ctggaaaaga	aaaaccgaag	agctcaaaac	agagtgcgtt	tgtttctggg	12120
aatcttcaag	cctctcactt	gcgaagacga	agcttactcg	taagggtgatt	atcttcttct	12180
tcttcttctt	ttcaattcct	ttttcgttca	tctgaaatgt	gaaatcatgt	gacgtgacga	12240
ttaggttaac	gatcgaattt	cttaatttcg	tatatgatta	tcttctagtt	tcttgatcag	12300
cacatcttgt	tgttttcttt	caatcgagac	tgattctaga	tgttcttaag	gatcttgttc	12360
gatgaacttt	gcatgaatca	tccatatcga	cgaactggtc	tgatcttctt	gttgttatgg	12420
attaagtttt	ttgagataca	agaaaggctt	caatgatcaa	tctgatctgt	tttgatgaac	12480
acaaatcttt	atctttgaac	catggataag	gtcaatttca	caccatggct	ggaggaagtt	12540
tatcaccggc	gtcatctttg	gaagatgtaa	aggcatacgt	caatgctgtg	gaggtcgcat	12600
tgcaggaaat	ggaacctgca	agattttggaa	tgtttgtaag	actctttcgt	ggttttacag	12660
ctcctaggtg	tgtttggttt	gctcttaaac	agtctaaaga	acaatgacac	atgtgagaat	12720
tgattctgat	gttatttttt	tctttgtagg	atcggtatgc	ctactttcag	tgcacgcatg	12780
caggacctct	tgaagatca	cccaggtctg	tgtcttggtt	taaatgtctt	acttccacct	12840
gagtatcagt	taaccatacc	ttccgaggct	agcgaagagt	ttcataaggt	ggttggaaga	12900
agcgtaccag	taccaccaa	gggtggttga	agaagtctac	cacgtccgga	gcctaccata	12960
gatgatgca	cttcatacct	tattgctgtg	aagggaagct	ttcatgatga	acctgcaaaa	13020
tatggggaaa	tgcttaagct	cttgaaagct	tttaaagctc	gcaggtagtg	attagttctt	13080
ttctccatgt	tatgtttgat	tttttcagtc	tacagacaaa	acacattatg	tgaattgatt	13140
ctgatgttac	taagtctctt	tgtagagtcg	atgccgcttg	tgtcattgct	aggggtggagg	13200
aactcatgaa	agatcacttg	aatctgcttt	ttggtttctg	tgtcttctct	tcagctacaa	13260
cgagttttac	cacgaagctt	aaggatataga	gtgcttatag	ttaccatttg	atgtttccta	13320
tatgttaact	tgtgggttaa	gtaacaaaat	tgtccatgtg	caggcaaggt	ttcagggcga	13380
tggtagtcaa	gtagttgact	cagttcttca	gataatgaga	atgtacggtg	agggaaacaa	13440
gtccaaacat	gatgcgtatc	aggaggtagg	cttcttggtg	ggatactttg	tgttgtgtgt	13500
tgcactttct	tagttctttg	gtttgatttg	ctttgttate	ttttgcagg	cgttgcaact	13560
gttcagggtc	atgacgattt	agtcatggag	ctttcacaaa	ttttgactga	tccacctact	13620
ggagtctaga	gatagccaga	tagctaagga	gagtactgga	agactgtaat	ataccataag	13680

<220>
<223> AGL2 cDNA

```

<400> 4
ccctcacaca tttcttatct tttgctctca atagattcca ttgattcaaa acaaaatttt 60
cattaagatt tcacaacctc cacacacttc caaacacaat taaagagagg aaaaagaatc 120
aataacccta taaataaaaa atcagacaaa cagaagtttc ctcttcttct tccttaagct 180
agtacctttt gttcttgaaa ttaggggttaa tttctttttt ccaaatacca tcaattctcc 240
agaccataaa aactcaaaaa gatcagatct ttcctctgaa aaagagatac ccaacttatg 300
tttttggtgtg tctgtatata gataaacatt acatacccat atttgtgtat agacataaaa 360
agtggaaatt aaggtaacaa aaagaa atg gga aga gga aga gta gag ctg aag 413
                Met Gly Arg Gly Arg Val Glu Leu Lys
                1                               5

```

aac ggt ttg ttg aag aaa gct tat gaa ttg tct gtt ctc tgt gat gct 509
Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala
30 35 40

gaa gtt gct ctc atc atc ttc tcc aac cgt gga aag ctc tat gag ttt	557
Glu Val Ala Leu Ile Ile Phe Ser Asn Arg Gly Lys Leu Tyr Glu Phe	
45 50 55	
tgc agc tcc tca aac atg ctc aag aca ctt gat cgg tac cag aaa tgc	605
Cys Ser Ser Ser Asn Met Leu Lys Thr Leu Asp Arg Tyr Gln Lys Cys	
60 65 70	
agc tat gga tcc att gaa gtc aac aac aaa cct gcc aaa gaa ctt gag	653
Ser Tyr Gly Ser Ile Glu Val Asn Asn Lys Pro Ala Lys Glu Leu Glu	
75 80 85	
aac agc tac aga gaa tat ctg aag ctt aag ggt aga tat gag aac ctt	701
Asn Ser Tyr Arg Glu Tyr Leu Lys Leu Lys Gly Arg Tyr Glu Asn Leu	
90 95 100 105	
caa cgt caa cag aga aat ctt ctt ggg gag gat tta gga cct ttg aat	749
Gln Arg Gln Gln Arg Asn Leu Leu Gly Glu Asp Leu Gly Pro Leu Asn	
110 115 120	
tca aag gag tta gag cag ctt gag cgt caa ctg gac ggc tct ctc aag	797
Ser Lys Glu Leu Glu Gln Leu Glu Arg Gln Leu Asp Gly Ser Leu Lys	
125 130 135	
caa gtt cgg tcc atc aag aca cag tac atg ctt gac cag ctc tgc gat	845
Gln Val Arg Ser Ile Lys Thr Gln Tyr Met Leu Asp Gln Leu Ser Asp	
140 145 150	
ctt caa aat aaa gag caa atg ttg ctt gaa acc aat aga gct ttg gca	893
Leu Gln Asn Lys Glu Gln Met Leu Leu Glu Thr Asn Arg Ala Leu Ala	
155 160 165	
atg aag ctg gat gat atg att ggt gtg aga agt cat cat atg gga gga	941
Met Lys Leu Asp Asp Met Ile Gly Val Arg Ser His His Met Gly Gly	
170 175 180 185	
tgg gaa ggc ggt gaa cag aat gtt acc tac gcg cat cat caa gct cag	989
Trp Glu Gly Gly Glu Gln Asn Val Thr Tyr Ala His His Gln Ala Gln	
190 195 200	
tct cag gga cta tac cag cct ctt gaa tgc aat cca act ctg caa atg	1037
Ser Gln Gly Leu Tyr Gln Pro Leu Glu Cys Asn Pro Thr Leu Gln Met	
205 210 215	
ggg tat gat aat cca gta tgc tct gag caa atc act gcg aca aca caa	1085
Gly Tyr Asp Asn Pro Val Cys Ser Glu Gln Ile Thr Ala Thr Thr Gln	
220 225 230	
gct cag gcg cag ccg gga aac ggt tac att cca gga tgg atg ctc tga	1133
Ala Gln Ala Gln Pro Gly Asn Gly Tyr Ile Pro Gly Trp Met Leu	
235 240 245	
gaatcatgta ctgtgatgaa gctcaccac aaaagacctt atatatatat aaagtataga	1193
tacaagacctt ggatttgtag acataagtgg ctaatatataat ggtcctgagg atcttctaga	1253
catttgatc ttttgggaat ccttgcttat attaagaatt c	1294

<210> 5
 <211> 248
 <212> PRT
 <213> Arabidopsis thaliana
 <223> AGAMOUS-LIKE 2 (AGL2)

<400> 5
 Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
 35 40 45
 Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Asn Met Leu
 50 55 60
 Lys Thr Leu Asp Arg Tyr Gln Lys Cys Ser Tyr Gly Ser Ile Glu Val
 65 70 75 80
 Asn Asn Lys Pro Ala Lys Glu Leu Glu Asn Ser Tyr Arg Glu Tyr Leu
 85 90 95
 Lys Leu Lys Gly Arg Tyr Glu Asn Leu Gln Arg Gln Gln Arg Asn Leu
 100 105 110
 Leu Gly Glu Asp Leu Gly Pro Leu Asn Ser Lys Glu Leu Glu Gln Leu
 115 120 125
 Glu Arg Gln Leu Asp Gly Ser Leu Lys Gln Val Arg Ser Ile Lys Thr
 130 135 140
 Gln Tyr Met Leu Asp Gln Leu Ser Asp Leu Gln Asn Lys Glu Gln Met
 145 150 155 160
 Leu Leu Glu Thr Asn Arg Ala Leu Ala Met Lys Leu Asp Asp Met Ile
 165 170 175
 Gly Val Arg Ser His His Met Gly Gly Trp Glu Gly Gly Glu Gln Asn
 180 185 190
 Val Thr Tyr Ala His His Gln Ala Gln Ser Gln Gly Leu Tyr Gln Pro
 195 200 205
 Leu Glu Cys Asn Pro Thr Leu Gln Met Gly Tyr Asp Asn Pro Val Cys
 210 215 220
 Ser Glu Gln Ile Thr Ala Thr Thr Gln Ala Gln Ala Gln Pro Gly Asn
 225 230 235 240
 Gly Tyr Ile Pro Gly Trp Met Leu
 245

<210> 6
 <211> 1349
 <212> DNA
 <213> Arabidopsis thaliana

<220>
 <223> AGL4 cDNA

<220>
 <221> CDS
 <222> (339)..(1091)
 <223> AGAMOUS-LIKE 4 (AGL4)

<400> 6
 gattcacaaa aacttttctt cagattcaca atctcatcac aacccttcaa aaagagaaaa 60
 gatctaaaga ataaacaaga gccctaatat caaatcacia ccaaaaaaac caaagaaagc 120
 taattaaagt tttctctcta gctattcctc ttcttttctt gttcttgaaa actagggttt 180

ccc act ttg caa att gga tat agc cat cca gtg tgc tca gag caa atg 1028
 Pro Thr Leu Gln Ile Gly Tyr Ser His Pro Val Cys Ser Glu Gln Met
 215 220 225 230

gct gtg acg gtg caa ggt cag tcc caa caa gga aac ggc tac atc cct 1076
 Ala Val Thr Val Gln Gly Gln Ser Gln Gln Gly Asn Gly Tyr Ile Pro
 235 240 245

ggc tgg atg ctg tga gcgatacttc ttcccccaat aaagatctta agcaagtact 1131
 Gly Trp Met Leu
 250

ggtgggggtct tcgtgggtgtg atcttagatc ttatgcatat gaataataat gttattgcac 1191

aagactttttg ctttttgtaga cacaagtggc tatagctgta atagccttca acatctctct 1251

tctgttttcag gatttggtttg tgcctattgt aattgcttat atatgtatgg tttgtataat 1311

gtgtgaaatg ttaacatcga ccatgtctca tctgggtga 1349

<210> 7

<211> 250

<212> PRT

<213> Arabidopsis thaliana

<220>

<223> AGAMOUS-LIKE 4 (AGL4)

<400> 7

Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1 5 10 15
 Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
 20 25 30
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ser Leu Ile Val Phe
 35 40 45
 Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Thr Ser Asn Met Leu
 50 55 60
 Lys Thr Leu Glu Arg Tyr Gln Lys Cys Ser Tyr Gly Ser Ile Glu Val
 65 70 75 80
 Asn Asn Lys Pro Ala Lys Glu Leu Glu Asn Ser Tyr Arg Glu Tyr Leu
 85 90 95
 Lys Leu Lys Gly Arg Tyr Glu Asn Leu Gln Arg Gln Gln Arg Asn Leu
 100 105 110
 Leu Gly Glu Asp Leu Gly Pro Leu Asn Ser Lys Glu Leu Glu Gln Leu
 115 120 125
 Glu Arg Gln Leu Asp Gly Ser Leu Lys Gln Val Arg Cys Ile Lys Thr
 130 135 140
 Gln Tyr Met Leu Asp Gln Leu Ser Asp Leu Gln Gly Lys Glu His Ile
 145 150 155 160
 Leu Leu Asp Ala Asn Arg Ala Leu Ser Met Lys Leu Glu Asp Met Ile
 165 170 175
 Gly Val Arg His His His Ile Gly Gly Gly Trp Glu Gly Gly Asp Gln
 180 185 190
 Gln Asn Ile Ala Tyr Gly His Pro Gln Ala His Ser Gln Gly Leu Tyr
 195 200 205
 Gln Ser Leu Glu Cys Asp Pro Thr Leu Gln Ile Gly Tyr Ser His Pro
 210 215 220

Val	Cys	Ser	Glu	Gln	Met	Ala	Val	Thr	Val	Gln	Gly	Gln	Ser	Gln	Gln
225					230					235					240
Gly	Asn	Gly	Tyr	Ile	Pro	Gly	Trp	Met	Leu						
				245					250						

<210> 8
 <211> 827
 <212> DNA
 <213> Arabidopsis thaliana

<220>
 <223> AGL9 cDNA

<220>
 <221> CDS
 <222> (10)..(819)
 <223> AGAMOUS-LIKE 9 (AGL9)

<400> 8
 cccggatcc aaa atg gga aga ggg aga gta gaa ttg aag agg ata gag aac 51
 Lys Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn
 1 5 10

aag atc aat agg caa gtg acg ttt gca aag aga agg aat ggt ctt ttg 99
 Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu
 15 20 25 30

aag aaa gca tac gag ctt tca gtt cta tgt gat gcg gaa gtt gct ctc 147
 Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu
 35 40 45

atc atc ttc tca aat aga gga aag ctg tac gag ttt tgc agt agt tcg 195
 Ile Ile Phe Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Ser
 50 55 60

agc atg ctt cgg aca ctg gag agg tac caa aag tgt aac tat gga gca 243
 Ser Met Leu Arg Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr Gly Ala
 65 70 75

cca gaa ccc aat gtg cct tca aga gag gcc tta gca gaa ctt agt agc 291
 Pro Glu Pro Asn Val Pro Ser Arg Glu Ala Leu Ala Glu Leu Ser Ser
 80 85 90

cag cag gag tat ctc aag ctt aag gag cgt tat gac gcc tta cag aga 339
 Gln Gln Glu Tyr Leu Lys Leu Lys Glu Arg Tyr Asp Ala Leu Gln Arg
 95 100 105 110

acc caa agg aat ctg ttg gga gaa gat ctt gga cct cta agt aca aag 387
 Thr Gln Arg Asn Leu Leu Gly Glu Asp Leu Gly Pro Leu Ser Thr Lys
 115 120 125

gag ctt gag tca ctt gag aga cag ctt gat tct tcc ttg aag cag atc 435
 Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Ser Ser Leu Lys Gln Ile
 130 135 140

aga gct ctc agg aca cag ttt atg ctt gac cag ctc aac gat ctt cag 483
 Arg Ala Leu Arg Thr Gln Phe Met Leu Asp Gln Leu Asn Asp Leu Gln
 145 150 155

agt aag gaa cgc atg ctg act gag aca aat aaa act cta aga cta agg 531
 Ser Lys Glu Arg Met Leu Thr Glu Thr Asn Lys Thr Leu Arg Leu Arg
 160 165 170

 tta gct gat ggg tat cag atg cca ctc cag ctg aac cct aac caa gaa 579
 Leu Ala Asp Gly Tyr Gln Met Pro Leu Gln Leu Asn Pro Asn Gln Glu
 175 180 185 190

 gag gtt gat cac tac ggt cgt cat cat cat caa caa caa caa cac tcc 627
 Glu Val Asp His Tyr Gly Arg His His His Gln Gln Gln Gln His Ser
 195 200 205

 caa gct ttc ttc cag cct ttg gaa tgt gaa ccc att ctt cag atc ggg 675
 Gln Ala Phe Phe Gln Pro Leu Glu Cys Glu Pro Ile Leu Gln Ile Gly
 210 215 220

 tat cag ggg caa caa gat gga atg gga gca gga cca agt gtg aat aat 723
 Tyr Gln Gly Gln Gln Asp Gly Met Gly Ala Gly Pro Ser Val Asn Asn
 225 230 235

 tac atg ttg ggt tgg tta cct tat gac acc aac tct att tga atc ttt 771
 Tyr Met Leu Gly Trp Leu Pro Tyr Asp Thr Asn Ser Ile Ile Phe
 240 245 250

 ctc act taa tca atc cct ctc ttt ttt ttt ttg aca ttt tta aga tga 819
 Leu Thr Ser Ile Pro Leu Phe Phe Phe Leu Thr Phe Leu Arg
 255 260 265 270

 tgttttcta 827

<210> 9

<211> 251

<212> PRT

<213> Arabidopsis thaliana

<220>

<223> AGAMOUS-LIKE 9 (AGL9)

<400> 9

Lys Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile
 1 5 10 15
 Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu Lys Lys
 20 25 30
 Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile
 35 40 45
 Phe Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Ser Ser Met
 50 55 60
 Leu Arg Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr Gly Ala Pro Glu
 65 70 75 80
 Pro Asn Val Pro Ser Arg Glu Ala Leu Ala Glu Leu Ser Ser Gln Gln
 85 90 95
 Glu Tyr Leu Lys Leu Lys Glu Arg Tyr Asp Ala Leu Gln Arg Thr Gln
 100 105 110
 Arg Asn Leu Leu Gly Glu Asp Leu Gly Pro Leu Ser Thr Lys Glu Leu
 115 120 125
 Glu Ser Leu Glu Arg Gln Leu Asp Ser Ser Leu Lys Gln Ile Arg Ala
 130 135 140
 Leu Arg Thr Gln Phe Met Leu Asp Gln Leu Asn Asp Leu Gln Ser Lys
 145 150 155 160

Glu	Arg	Met	Leu	Thr	Glu	Thr	Asn	Lys	Thr	Leu	Arg	Leu	Arg	Leu	Ala
			165						170					175	
Asp	Gly	Tyr	Gln	Met	Pro	Leu	Gln	Leu	Asn	Pro	Asn	Gln	Glu	Glu	Val
			180					185				190			
Asp	His	Tyr	Gly	Arg	His	His	His	Gln	Gln	Gln	Gln	His	Ser	Gln	Ala
		195					200					205			
Phe	Phe	Gln	Pro	Leu	Glu	Cys	Glu	Pro	Ile	Leu	Gln	Ile	Gly	Tyr	Gln
	210					215					220				
Gly	Gln	Gln	Asp	Gly	Met	Gly	Ala	Gly	Pro	Ser	Val	Asn	Asn	Tyr	Met
225					230					235					240
Leu	Gly	Trp	Leu	Pro	Tyr	Asp	Thr	Asn	Ser	Ile					
			245						250						

<210> 10
 <211> 4
 <212> PRT
 <213> Arabidopsis thaliana

<220>
 <223> AGL9 cDNA peptide

<400> 10
 Ile Phe Leu Thr
 1

<210> 11
 <211> 12
 <212> PRT
 <213> Arabidopsis thaliana

<220>
 <223> AGL9 cDNA peptide

<400> 11
 Ser Ile Pro Leu Phe Phe Phe Leu Thr Phe Leu Arg
 1 5 10

<210> 12
 <211> 5368
 <212> DNA
 <213> Arabidopsis thaliana

<220>
 <223> AP1 promoter

<400> 12
 gaattcccccgatctccata tacatatcat acatatatat agtatactat ctttagactg 60
 atttctctat acactatctt ttaacttatg tatcgtttca aaactcagga cgtacatggt 120
 ttaaatttgg ttatataacc acgaccattt caagtatata tgtcatacca taccagattt 180
 aatataactt ctatgaagaa aatacataaa gttggattaa aatgcaagtg acatcttttt 240
 agcatagggt catttggcat agaagaaata tataactaaa aatgaacttt aacttaaata 300
 gattttacta tattacaatt ttttcttttt acatggtcta atttattttt ctaaaattag 360
 tatgattggt gttttgatga aacaataata ccgtaagcaa tagttgctaa aagatgtcca 420
 aatatttata aattacaaag taaatcaaat aaggaagaag acacgtggaa aacaccaaata 480
 aagagaagaa atggaaaaaa cagaaagaaa ttttttaaca agaaaaatca attagtcttc 540
 aaacctgaga tattttaaagt aatcaactaa aacaggaaca cttgactaac aaagaaattt 600
 gaaatgtggt ccaactttca cttaattata ttgttttctc taaggcttat gcaatatatg 660
 ccttaagcaa atgccgaatc tgtttttttt ttttggttatt ggatattgac tgaaaataag 720

gggttttttc	acacttgaag	atctcaaaag	agaaaactat	tacaacggaa	attcattgta	780
aaagaagtga	ttaagcaa	tgagcaaagg	tttttatgtg	gtttatttca	ttatatgatt	840
gacatcaa	tgtatatata	tggttgtttt	atttaaca	atatatggat	ataacgtaca	900
aactaaat	gtttgattga	cgaaaaaaa	tatatgtatg	tttgattaac	aacatagcac	960
atattcaact	gatttttgtc	ctgatcatct	acaactta	aagaacacac	aacattgaaa	1020
aaatctttga	caaaatacta	tttttggggt	tgaaattttg	aataacttaca	attattcttc	1080
tcgatcttcc	tctctttcct	taaatcctgc	gtacaaatcc	gtcgacgcaa	tacattacac	1140
agttgtcaat	tggttctcag	ctctaccaa	aacatctatt	gccaaaagaa	aggtctat	1200
gtacttca	gttacagctg	agaacattaa	atataataag	caaatttgat	aaaacaaagg	1260
gttctcacct	tattccaaaa	gaatagtgtg	aaatagggtg	atagagaaat	gttaataaaa	1320
ggaaattaaa	aatagatatt	ttggttgggt	cagattttgt	ttcgtagatc	tacagggaaa	1380
tctccgccgt	caatgcaaag	cgaagggtgac	acttggggga	ggaccagtgg	tccgtaca	1440
gttacttacc	catttctctt	cacgagacgt	cgataatcaa	attgtttatt	ttcatat	1500
taagtccgca	gttttattaa	aaaatcatgg	acccgacatt	agtacgagat	ataccaatga	1560
gaagtgcaga	cgcaaatcct	aaagaaacca	ctgtggtttt	tgcaaaacaag	agaaaccagc	1620
tttagctttt	ccctaaaacc	actcttacc	aaatctctcc	ataaataaag	atcccagac	1680
tcaaacacaa	gtctttttat	aaaggaaaaga	aagaaaaact	ttcctaattg	gttcatacca	1740
aagtctgagc	tcttctttat	atctctcttg	tagtttctta	ttgggggtct	ttgttttgtt	1800
tggttctttt	agagtaagaa	gtttcttaaa	aaaggatcaa	aaatgggaag	gggtagggtt	1860
caattgaaga	ggatagagaa	caagatcaat	agacaagtga	cattctcgaa	aagaagagct	1920
gggtcttttga	agaaagctca	tgagatctct	gttctctgtg	atgctgaagt	tgctcttgtt	1980
gtcttctccc	ataaggggaa	actcttcgaa	tactccactg	attcttggtg	acttcaacta	2040
attctttact	tttaaaaaaa	tcttttaate	tgtacttcta	tatagttttt	ttccccctta	2100
agttgactac	ttgatttgcc	ctaattattc	actactgctt	ttgttatata	ttttctaggg	2160
cttccatttt	tggatttttt	gattagccag	aaaaatggtt	aatacaaat	tgtataat	2220
aaaaatcaaa	actttagggc	cgtagtgaag	tgaaccctag	aacacacaga	ttataccata	2280
gtaattacct	tgatatattg	tgcaatattt	atcagcatca	tatcttcaaa	ctcaagagat	2340
atagaagggt	atgttaatct	ttgaactagg	gttttgatcc	ctaactcata	atgaatcctt	2400
ttgttctcca	atagccatgt	ctttcgaatt	tgcagatcta	agctctaatt	gatgccatag	2460
taagaaaata	agatctgtag	ttttcactcg	ctcactgagt	tcgagtttta	aatgaagtgt	2520
cgtttctttt	ttcatatata	gttgcaactg	gattataatt	aaaaaatatt	atgggacgag	2580
aaaataat	aaaatagata	tagataacca	tgtcaaat	agaatttttt	attagaaaga	2640
atatttaact	tacgagttgt	tttttttcag	ctgtaaaaga	atatctaatt	tgttctcacg	2700
actgtgtctt	catgtttttg	aaatctaagc	aaagaaaatg	tttaaactcg	gatcttaaga	2760
ttatgaactc	gtaatataaa	acactatata	gtattaaatt	tgaactagt	ttgcttcttt	2820
tgctactttg	actttagaaa	ttaaaactga	aacaaagatg	tcaaactctga	gtagggagtc	2880
tttgacctct	ggggatccat	aaaaagaact	aactccatcc	taaaatcggc	ttcttaccga	2940
tggtcaaaact	tagctccaac	aagcaacagc	tggtcttctt	tttttttttt	tttttttttt	3000
tttaagcatt	gtccttggtc	tgaaaaaaa	taagattggt	aaattggcaa	gattataata	3060
atattattata	atgtgtcgca	ctaagaagat	tttctgtacc	taattgtagc	aaaattaaag	3120
aaaccgcagt	tagaactcga	agctaagagc	ataggggtcta	tgattcatac	tgttttgtta	3180
ttataaagg	atcatagaga	tcgggtactg	attgtgtata	ggaaatcttg	gttttaattgc	3240
ataaaacct	cattagattt	atcctaaaat	gtgatgat	tttggtcaca	tctccatatt	3300
atattatata	taaaatgata	attggttgat	gataaagcta	accctaattc	tgtgaaatga	3360
tcagtatgga	gaagatactt	gaacgctatg	agagggtactc	ttacgccgaa	agacagctta	3420
ttgcacctga	gtccgacgtc	aatgtatttc	aataaatatt	tctcctttta	atccacatat	3480
atattatata	aatctatttg	tagtattgat	gaattttatt	tgtataaaac	ttctgggtaca	3540
cagacaaaact	ggtcgatgga	gtataacagg	cttaaggcta	agattgagct	tttgagaga	3600
aaccagaggt	acacatttac	actcatcaca	tttctatcta	gaaaatcgat	cgggttccat	3660
tttaaagtaa	gttaaaattc	attgatgcta	ttgaaattca	ggcattatct	tggggaagac	3720
ttgcaagcaa	tgagccctaa	agagcttcag	aatctggagc	agcagcttga	cactgctctt	3780
aagcacatcc	gcactagaaa	agtattgcct	cttgtatttt	cgttgaacat	atctatataa	3840
cttaaacggt	tacaagtgtt	attataatgt	gaacattgaa	atacatatgt	gtatgtatca	3900
atataatata	cagtaatcaa	tatcaatttg	atatgtctat	aggttggttc	gaatgtatga	3960
gttatgttgt	gtattttaag	actccatatt	acttaaagta	atgggttggt	aatgttgatg	4020
tgtgtgtatg	cagaaccaac	ttatgtacga	gtccatcaat	gagctccaaa	aaaagggtatg	4080
taaaaccct	atcaaagtga	tgtcttatag	agaaacgtat	aggaaagcta	attaacaatc	4140
gtgccgtttc	ggaaatgaca	ggagaaggcc	atacaggagc	aaaacagcat	gctttctaaa	4200
caggtaacac	atgtcatcat	ttctctttca	tcaacatggt	gtccattgca	ttactgttac	4260
cttccactgt	tctgtctcac	acttccagcc	aagctatacc	tacgatatct	tcatatctcc	4320
acttaacttc	ggcaccatta	aataaaaaata	gaaaatcttt	gcaaatttgt	ttgaaatagc	4380


```

atagatgttg tctattgatt gatataatca ccagcctgta cgtagatatg gtttgtccgt 4440
ttagtttttaa ggtgtctctc ggattgaaaa tattttgaaa tcttttgaaa tgtttgtccc 4500
atcattctta cttagctcat atctatgtat atgaatatag acactactcc taattataaa 4560
atgttataat agttcattgc atgagtgcaa ctgtgaaaat aactatttgt aaccattgca 4620
tatatatagt ttcttcactt tgaaaattga tgatgataat atggtttgaa ataaaattgc 4680
tggcagatca aggagaggga aaaaattctt agggctcaac aggagcagtg ggatcagcag 4740
aaccaaggcc acaatatgcc tccccctctg ccaccgcagc agcaccaaatt ccagcatcct 4800
tacatgctct ctcatcagcc atctcctttt ctcaacatgg ggtaacaaaa aattactaat 4860
cagtcttaat ttaaagcaca tatgttatgc aagctagtta cgtaggtgt tgtaatttca 4920
ttgaagttat agctgttagt gatggttaca tgatgctaga ttttgaaact agaaaacttt 4980
attttaaaac attattttat taacgtaggt taatgcaatg gtcgccaac gaacaaactt 5040
attagtgtgg aaaaatgtac atggaatggg tgcgaaaagc ctaagtcgac ttttgttggt 5100
gttggtctat gtgtttaagt acaatttttag tttgttagat aaatgaaatt aatatacttt 5160
tgacatttca caatggactg atatttgatt ttcttttggt gtacggtgaa acatatgatt 5220
acatatgcac ttccatatat atcctatgta tgattgtgaa tgcagtggtc tgtatcaaga 5280
agatgatcca atggcaatga ggaggaatga tctcgaactg actccttgaa ccgtttacaa 5340
ctgcaacctt ggctgcttcg ccgcatga 5368

```

<210> 13
 <211> 1220
 <212> DNA
 <213> *Arabidopsis thaliana*

<220>
 <223> AP1 cDNA

<220>
 <221> CDS
 <222> (141)..(911)
 <223> AP1

<400> 13
 gaattcggca cgagaacttt cctaattggg tcataccaaa gtctgagctc ttctttatat 60
 ctctcttgta gtttcttatt gggggtcttt gttttgtttg gttcttttag agtaagaagt 120
 ttcttaaaaa aggatcaaaa atg gga agg ggt agg gtt caa ttg aag agg ata 173
 Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile
 1 5 10
 gag aac aag atc aat aga caa gtg aca ttc tcg aaa aga aga gct ggt 221
 Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ser Lys Arg Arg Ala Gly
 15 20 25
 ctt ttg aag aaa gct cat gag atc tct gtt ctc tgt gat gct gaa gtt 269
 Leu Leu Lys Lys Ala His Glu Ile Ser Val Leu Cys Asp Ala Glu Val
 30 35 40
 gct ctt gtt gtc ttc tcc cat aag ggg aaa ctc ttc gaa tac tcc act 317
 Ala Leu Val Val Phe Ser His Lys Gly Lys Leu Phe Glu Tyr Ser Thr
 45 50 55
 gat tct tgt atg gag aag ata ctt gaa cgc tat gag agg tac tct tac 365
 Asp Ser Cys Met Glu Lys Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr
 60 65 70 75
 gcc gaa aga cag ctt att gca cct gag tcc gac gtc aat aca aac tgg 413
 Ala Glu Arg Gln Leu Ile Ala Pro Glu Ser Asp Val Asn Thr Asn Trp
 80 85 90

```

tcg atg gag tat aac agg ctt aag gct aag att gag ctt ttg gag aga 461
Ser Met Glu Tyr Asn Arg Leu Lys Ala Lys Ile Glu Leu Leu Glu Arg
          95                      100                      105

aac cag agg cat tat ctt ggg gaa gac ttg caa gca atg agc cct aaa 509
Asn Gln Arg His Tyr Leu Gly Glu Asp Leu Gln Ala Met Ser Pro Lys
          110                      115                      120

gag ctt cag aat ctg gag cag cag ctt gac act gct ctt aag cac atc 557
Glu Leu Gln Asn Leu Glu Gln Gln Leu Asp Thr Ala Leu Lys His Ile
          125                      130                      135

cgc act aga aaa aac caa ctt atg tac gag tcc atc aat gag ctc caa 605
Arg Thr Arg Lys Asn Gln Leu Met Tyr Glu Ser Ile Asn Glu Leu Gln
          140                      145                      150                      155

aaa aag gag aag gcc ata cag gag caa aac agc atg ctt tct aaa cag 653
Lys Lys Glu Lys Ala Ile Gln Glu Gln Asn Ser Met Leu Ser Lys Gln
          160                      165                      170

atc aag gag agg gaa aaa att ctt agg gct caa cag gag cag tgg gat 701
Ile Lys Glu Arg Glu Lys Ile Leu Arg Ala Gln Gln Glu Gln Trp Asp
          175                      180                      185

cag cag aac caa ggc cac aat atg cct ccc cct ctg cca ccg cag cag 749
Gln Gln Asn Gln Gly His Asn Met Pro Pro Pro Leu Pro Pro Gln Gln
          190                      195                      200

cac caa atc cag cat cct tac atg ctc tct cat cag cca tct cct ttt 797
His Gln Ile Gln His Pro Tyr Met Leu Ser His Gln Pro Ser Pro Phe
          205                      210                      215

ctc aac atg ggt ggt ctg tat caa gaa gat gat cca atg gca atg agg 845
Leu Asn Met Gly Gly Leu Tyr Gln Glu Asp Asp Pro Met Ala Met Arg
          220                      225                      230                      235

agg aat gat ctc gaa ctg act ctt gaa ccc gtt tac aac tgc aac ctt 893
Arg Asn Asp Leu Glu Leu Thr Leu Glu Pro Val Tyr Asn Cys Asn Leu
          240                      245                      250

ggc tgc ttc gcc gca tga agcatttcca tatatatata tttgtaatcg 941
Gly Cys Phe Ala Ala
          255

tcaacaataa aaacagtttg ccacatacat ataaatagtg gctaggctct tttcatccaa 1001

ttaatatatt ttggcaaatg ttcgatgttc ttatatcatc atatataaat tagcaggctc 1061

ctttcttctt ttgtaatttg ataagtttat ttgcttcaat atggagcaaa attgtaatat 1121

atttgaaggt cagagagaat gaacgtgaac ttaatagaaa aaaaaaaaaa aaaaaaaaaa 1181

aaaaaaaaa aaaaaaaccc gacgtagctc gaggaattc 1220

```

<210> 14

<211> 256

<212> PRT

<213> Arabidopsis thaliana

<220>

<223> AP1

<400> 14

```

Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1           5           10           15
Arg Gln Val Thr Phe Ser Lys Arg Arg Ala Gly Leu Leu Lys Lys Ala
      20           25           30
His Glu Ile Ser Val Leu Cys Asp Ala Glu Val Ala Leu Val Val Phe
      35           40           45
Ser His Lys Gly Lys Leu Phe Glu Tyr Ser Thr Asp Ser Cys Met Glu
      50           55           60
Lys Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr Ala Glu Arg Gln Leu
      65           70           75           80
Ile Ala Pro Glu Ser Asp Val Asn Thr Asn Trp Ser Met Glu Tyr Asn
      85           90           95
Arg Leu Lys Ala Lys Ile Glu Leu Leu Glu Arg Asn Gln Arg His Tyr
      100          105          110
Leu Gly Glu Asp Leu Gln Ala Met Ser Pro Lys Glu Leu Gln Asn Leu
      115          120          125
Glu Gln Gln Leu Asp Thr Ala Leu Lys His Ile Arg Thr Arg Lys Asn
      130          135          140
Gln Leu Met Tyr Glu Ser Ile Asn Glu Leu Gln Lys Lys Glu Lys Ala
      145          150          155          160
Ile Gln Glu Gln Asn Ser Met Leu Ser Lys Gln Ile Lys Glu Arg Glu
      165          170          175
Lys Ile Leu Arg Ala Gln Gln Glu Gln Trp Asp Gln Gln Asn Gln Gly
      180          185          190
His Asn Met Pro Pro Pro Leu Pro Pro Gln Gln His Gln Ile Gln His
      195          200          205
Pro Tyr Met Leu Ser His Gln Pro Ser Pro Phe Leu Asn Met Gly Gly
      210          215          220
Leu Tyr Gln Glu Asp Asp Pro Met Ala Met Arg Arg Asn Asp Leu Glu
      225          230          235          240
Leu Thr Leu Glu Pro Val Tyr Asn Cys Asn Leu Gly Cys Phe Ala Ala
      245          250          255

```

<210> 15

<211> 1374

<212> DNA

<213> Arabidopsis thaliana

<220>

<223> AGL4 cDNA

<220>

<221> CDS

<222> (347)..(1099)

<223> AGL4

<400> 15

```

gaattccgga ttcacaaaaa cttttcttca gattcacaat ctcattcaca cctttcaaaa 60
agagaaaaa tctaaagaat aaacaagagc cctaatatca aatcacaacc aaaaaaacca 120
aagaaagcta attaaagttt tctctctagc tattctctct cttttcttgt tcttgaaaac 180
tagggtttac ttcacaaaaa gataagatct ttccccagaa aaagcaatac ccaagtcatt 240
tttctgtgtg tctgtatata gataaaacat tacataccct aataagggtt cacaaatagc 300
tataaaagag ggaaaataag ataggggatt tttgggggtg ggaaagatgg gaagaggaag 360
agtagagctc aagaggatag agaacaaaat caacagacaa gtgacgtttg ctaaactgtg 420
aatgggtttg ctgaaaaaag cttatgagct ttctgttctc tgcgatgctg aagtctctct 480
catcgtcttc tccaaccgtg gcaagctcta cgagttctgc agcacctcca acatgctcaa 540

```

```

gacactggaa aggtatcaga agtgtagcta tggctccatt gaagtcaaca acaaacctgc 600
taaagagctt gagaacagct acagagagta cttgaagctg aaaggtagat atgaaaatct 660
gcaacgtcag cagagaaatc ttcttggaga ggatcttga cctctgaatt caaaggagct 720
agagcagctt gagcgtcaac tagacggctc tctgaagcaa gtctgctgca tcaagacaca 780
gtatatgctt gaccagctct ctgatcttca aggtaaggag catatcttgc ttgatgccaa 840
cagagctttg tcaatgaagc tggaaagatat gatcggcgctg agacatcacc atataggagg 900
aggatgggaa ggtggtgatc aacagaatat tgccatgga catcctcagg ctcatctca 960
gggactatac caatctcttg aatgtgatcc cactttgcaa attggatata gccatccagt 1020
gtgctcagag caaatggctg tgacgggtgca aggtcagctc caacaaggaa acggctacat 1080
ccctggctgg atgctgtgag cgatacttct tcccccaata aagatcttaa gcaagtactg 1140
gtggggctct cgtggtgtga tcttagatct tatgcatatg aataataatg ttattgcaca 1200
agacttttgc ttttgtagac acaagtggct atagctgtaa tagccttcaa catctctctt 1260
ctgtttcagg atttgtttgt gcctattgta attgcttata tatgtatggt ttgtataatg 1320
tgtgaaatgt taacatcgac catgtctcat ctggtgaaaa aaaaaaaaaa aaaa 1374

```

```

<210> 16
<211> 1303
<212> DNA
<213> Arabidopsis thaliana

```

```

<220>
<223> AGL2 cDNA

```

```

<220>
<221> CDS
<222> (396)..(1142)
<223> AGL2

```

```

<400> 16
gaattccggc cctcacacat ttcttatctt ttgctctcaa tagattccat tgattcaaaa 60
caaaattttc attaagattt cacaacctcc acacacttcc aaacacaatt aaagagagga 120
aaaagaatca ataaccctat aaataaaaaa tcagacaaac agaagtttcc tcttcttctt 180
ccttaagcta gtaccttttg ttcttgaaat taggggttaat ttcttttttc caaataccat 240
caatttctca gaccataaaa actcaaaaag atcagatctt tcctctgaaa aagagatacc 300
caacttatgt ttttgtgtgt ctgtatatag ataaacatta catacccata tttgtgtata 360
gacataaaaa gtggaaatta aggtaacaaa aagaaatggg aagaggaaga gtagagctga 420
agaggataga gaacaaaatc aacagacaag taacgtttgc aaagcgtagg aacggtttgt 480
tgaagaaagc ttatgaattg tctgttctct gtgatgctga agttgctctc atcatcttct 540
ccaaccgtgg aaagctctat gagttttgca gctcctcaaa catgctcaag acacttgatc 600
ggtagcagaa atgcagctat ggatccattg aagtcaacaa caaacctgcc aaagaacttg 660
agaacagcta cagagaatat ctgaagctta agggtagata tgagaacctt caacgtcaac 720
agagaaatct tcttggggag gatttaggac ctttgaattc aaaggagtta gaggagcttg 780
agcgtcaact ggacggctct ctcaagcaag ttcgggtccat caagacacag tacatgcttg 840
accagctctc ggatcttcaa aataaagagc aaatgttgct tgaaaccaat agagcttttg 900
caatgaagct ggatgatatg attggtgtga gaagtcatca tatgggagga tgggaaggcg 960
gtgaacagaa tgttacctac gcgcatcatc aagctcagtc tcagggacta taccagcctc 1020
ttgaatgcaa tccaactctg caaatggggg atgataatcc agtatgctct gagcaaatca 1080
ctgcgacaac acaagctcag gcgcagccgg gaaacgggta cattccagga tggatgctct 1140
gagaatcatg tactgtgatg aagctcacc acaaaagacc ttatatatat ataaagtata 1200
gatacaagac ttggatttgt agacataagt ggctaataata atggtcctga ggatcttcta 1260
gacatttgta tcttttggga atccttgctt atattaagaa ttc 1303

```

```

<210> 17
<211> 30
<212> DNA
<213> Artificial Sequence

```

<220>

<223> Description of Artificial Sequence:forward primer
AP1HIN

<400> 17

caagcttgta cacatttaca ctcacacat

30

<210> 18

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:reverse primer
AP1BAM

<400> 18

cggatcctgc gcgaagcagc caagggtg

28